GASTRIC BAND WITH ASYMMETRICAL MEMBER

BACKGROUND

[0001] A variety of systems and devices have been made and used for treating morbid obesity. Some such systems and devices include adjustable gastric band systems, which are operable to restrict the flow of food from the esophagus into the stomach. Some gastric bands include a fluid-filled elastomeric bladder with fixed endpoints that encircles the stomach just inferior to the gastro-esophageal junction. When fluid is added to the bladder, the band expands against the stomach, creating a food intake restriction or stoma in the stomach. To decrease this restriction, fluid is removed from the bladder. Examples of gastric bands are disclosed in U.S. Pat. No. 7,416,528, entitled "Latching Device for Gastric Band," issued Aug. 26, 2008, the disclosure of which is incorporated by reference herein. Another example of such an adjustable gastric band is disclosed in U.S. Pat. No. 6,067,991, entitled "Mechanical Food Intake Restriction Device," issued May 30, 2000, the disclosure of which is incorporated by reference herein. Yet another example of an adjustable gastric band is disclosed in U.S. Pat. No. 7,530,943, entitled "Adjustable Stomach Band," issued May 12, 2009, the disclosure of which is incorporated by reference herein.

[0002] To the extent that an adjustable gastric band system includes an injection port configured to receive the needle of a syringe assembly to add or withdraw fluid to or from the gastric band, those of ordinary skill in the art will appreciate that it may be desirable in some settings to locate both the injection port and, more specifically, the center of the injection port (e.g., when the septum of the injection port is at the center of the injection port). Locating the approximate center of the injection port with some degree of accuracy may facilitate addition or withdrawal of fluid via the injection port to adjust the gastric band system. One example of a system and method for identifying the location of an injection port is disclosed in U.S. Pub. No. 2006/0211914, entitled "System and Method for Determining Implanted Device Positioning and Obtaining Pressure Data" published Sep. 21, 2006, the disclosure of which is incorporated by reference herein.

[0003] Those of ordinary skill in the art will appreciate that it may be advantageous in certain circumstances to sense pressure, strain, and/or other parameters associated with operation of a gastric band device. In some settings, it may be desirable to obtain data indicative of the pressure of fluid in a gastric band. Various examples of methods and devices for obtaining pressure data and other types of data are disclosed in U.S. Pub. No. 2006/0189888, entitled "Device for Non-Invasive Measurement of Fluid Pressure in an Adjustable Restriction Device," published Aug. 24, 2006, the disclosure of which is incorporated by reference herein. Additional examples of methods and devices for obtaining pressure data and other types of data are disclosed in U.S. Pub. No. 2006/0199997, entitled "Monitoring of a Food Intake Restriction Device," published Sep. 7, 2006, the disclosure of which is incorporated by reference herein. Such parameter data may be obtained before, during, and/or after adjustment of a gastric band, and may be useful for adjustment, diagnostic, monitoring, or other purposes, and may also be obtained with respect to a mechanically actuated gastric band. In settings where a fluid-filled gastric band is used, pressure data may be used to determine whether the amount of fluid in the gastric band needs to be adjusted; and/or for other purposes.

[0004] While a variety of gastric band systems have been made and used, it is believed that no one prior to the inventor (s) has made or used an invention as described herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] While the specification concludes with claims which particularly point out and distinctly claim the invention, it is believed the present invention will be better understood from the following description of certain examples taken in conjunction with the accompanying drawings, in which like reference numerals identify the same elements and in which:

[0006] FIG. **1** depicts a perspective view of an implantable portion of an exemplary gastric band system;

[0007] FIG. **2** depicts a perspective view of the gastric band of FIG. **1**, showing the band positioned around the gastro-esophageal junction of a patient;

[0008] FIG. **3** depicts a cross-sectional view of the gastric band of FIG. **1**, showing the band positioned around the gastro-esophageal junction of a patient in a deflated configuration;

[0009] FIG. **4** depicts a cross-sectional view of the gastric band of FIG. **1**, showing the band positioned around the gastro-esophageal junction of a patient in an inflated configuration to create a food intake restriction;

[0010] FIG. **5**A depicts a cross-sectional view of the gastric band of FIG. **1**, showing the gastric band having a generally symmetric profile, in a substantially non-inflated configuration;

[0011] FIG. **5**B depicts a cross-sectional view of the gastric band of FIG. **5**A, in a substantially inflated configuration;

[0012] FIG. **6** depicts a cross-sectional view of the gastric band of FIG. **5**A installed at the gastro-esophageal junction of a patient;

[0013] FIG. **7**A depicts a cross-sectional view of an exemplary gastric band having a generally asymmetric profile and a substantially uniform wall thickness, in a substantially non-inflated configuration;

[0014] FIG. **7**B depicts a cross-sectional view of the gastric band of FIG. **7**A, in a substantially inflated configuration;

[0015] FIG. **8** depicts a cross-sectional view of the gastric band of FIG. **7**A installed at the gastro-esophageal junction of a patient;

[0016] FIG. **9**A depicts a cross-sectional view of an exemplary gastric band having a generally asymmetric profile and a varying wall thickness, in a substantially non-inflated configuration;

[0017] FIG. **9**B depicts a cross-sectional view of the gastric band of FIG. **9**A, in a substantially inflated configuration;

[0018] FIG. **10**A depicts a cross-sectional view of an exemplary gastric band having a generally asymmetric profile, a substantially uniform wall thickness, and an expansion section, in a substantially non-inflated configuration;

[0019] FIG. **10**B depicts a cross-sectional view of the gastric band of FIG. **10**A, in a substantially inflated configuration;

[0020] FIG. **11**A depicts a cross-sectional view of an exemplary gastric band having a generally asymmetric profile, a varying wall thickness, and an expansion section, in a substantially non-inflated configuration;

[0021] FIG. **11**B depicts a cross-sectional view of the gastric band of FIG. **11**A, in a substantially inflated configuration;